REMARKS

The Applicants confirm receipt of the Office Action dated March 23, 2010. Claims 1-45 were previously pending. Claims 25-45 have been withdrawn, and claims 1-24 are rejected.

The Applicant herein has amended pages 9 and 15, as well as drawing sheets 10 and 12, to correct minor typographical errors. A new Fig. 1(d) is added to the drawings. The corrections of typographical errors in the description and drawings are as follows:

1.	Delete reference numeral "21" at page 9, line 10 after "the hollowed section".
2.	At page 9, line 20, replace "This radius of the cap" with "The radius r_{hc} of the cap 20.
3.	At page 9, line 25, insert: "Fig. 1(d) is a block diagram of the antenna of Fig. 1(a). The antenna 10 has a coaxial cable transmission line 11 with an antenna element 12 at the distal end of the transmission line 11." before "A Telfon sheath …"
4.	At page 9, line 26, insert: "The antenna 10 further comprises a temperature sensor 5 to sense the temperature of the tissue being ablated by the antenna 10." after "construction."
5.	Delete "(not shown)" at page 9, line 25 and insert "6".
6.	At page 15, lines 8-9, replace "$D_5 = D_T - D_4$" with "$D_5 = C_L - (L_t + L_{ix})$". This correction is fully supported by Fig. 3(c).
7.	In Figs. 3(c) and 4(c), replace the label "L_r" with "L_{ir}".
8.	Insert new Fig. 1(d).

The Applicant has made the following changes to the claims:

1.	Cancel original claims 7, 9, 18, and 19.
2.	Amend claim 1 to incorporate the limitations/features of cancelled claims 7 and 18.
3.	Amend claim 2 to delete "particular".

4.	Amend claim 6 to delete "further" before "include".
5.	Amend original dependent claims 8, 10, and 11 to each depend from original claim 1.
6.	Amend claim 12 by replacing the pronoun "them" with the proper noun "the conducting rings".
7.	Amend claim 13 by replacing the pronoun "them" with the proper noun "the conducting rings".
8.	Amend claim 14 by replacing the pronoun "them" with the proper noun "the conducting rings".
9.	Amend claim 22 by replacing "wherein the antenna further comprises" with "comprising".
10.	Amend claim 23 by replacing "wherein the" with "comprising a".

The Applicants amended the claims to cancel "further" in several dependent claims and to recite "metallic" cap in independent claim 1.

The Applicants' responses below are numbered according to the paragraph numbers of the Office Action.

1. No comment is required.

2-6. The Applicants confirm the election of claims 1-24 and that claims 24-45 are withdrawn. No change to the currently named inventors is required.

7. The Applicants note that dependent claims 20, 21, and 22 are objected to. The Applicants submit that those skilled in the art would understand that the Teflon sheath, which is mentioned in page 9 (paragraph/line 25) as not being shown in the application diagrams, would be used to protect the tissue from possible damage from any irregular surface of the antenna/catheter/temperature sensor. This was omitted from the relevant drawings so as not to obscure the invention. The Applicants propose to add a new Fig. 1(d).

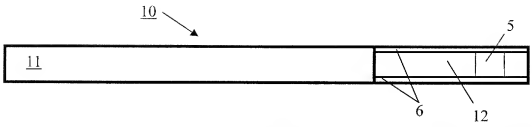

FIG. 1D

8. The specification has been amended to refer to Teflon as: "TEFLON ®, which is a registered trademark for polytetrafluoroethylene (PTFE),"

9. Claims 10, 15, and 16 have been amended in accordance with the Examiner's suggestions. Claim 19 has been cancelled.

10 & 11. Claims 1-24 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

The applicant respectfully submits that the meaning of the inner conductor of the transmission line and the inner conductor of the antenna element are clear and appropriately define the claimed invention. However, minor amendments are proposed to further distinctly claim the invention in claims 1, 5, and 6.

Claim 2 is amended to provide antecedents to address the rejection.

Claim 3 is amended to recite that the antenna element is coupled to the end of the transmission line, and the cap is coupled to the inner conductor of the transmission line. Consequential amendments are made to claims 4-6.

Claim 5 is amended by replacing "shorter" with "short".

Claim 8 defines that the insulating rings are provided in the slots and the antecedency for conducting rings is provided. Claim 9 is cancelled.

Antecedency for "the slots" and "the conducting rings" is provided in amended claim 1.

Claim 17 is amended in accordance with the suggestion in the Office Action.

Claim 19 is cancelled.

Regarding claims 23 and 24, the antecedency regarding the microwave generator is corrected.

12 & 13. Claims 1-13 and 16-17 are rejected under 35 USC 102(b) as being anticipated by Ito et al US Patent No. 5,026,959 (Ito).

Claim 1 specifies A microwave antenna for medical ablation, comprising a transmission line having an inner conductor, an outer conductor and a dielectric insulator to provide insulation between the inner and outer conductors of the transmission line. An energy-emitting antenna element is positioned at the distal end of the transmission line to transmit a microwave near-field. The antenna element has an inner conductor electrically coupled to the inner conductor of the transmission line, and a sheath of dielectric insulator around the inner conductor of the antenna element. The antenna element comprises a conducting metallic cap that is electrically connected to the distal end of the inner conductor of the antenna element, the cap surrounding a length of the sheath of insulator, and the dimensions of the cap being determined to provide impedance matching between the antenna element and the transmission line. The antenna element is configured with conducting rings spaced apart from each other along the length of the antenna element by slots and being configured by being bent to form an open loop oriented such that the

antenna element extends transverse to the longitudinal axis of the transmission line.

Ito describes a slotted array coaxial antenna for microwave heating. Ito does not specify the size, materials, the microwave frequency or the use of the device in any detail. A slotted array for microwave transmission is widely used throughout a variety of industries. Ito does not anticipate or even suggest the claim invention as amended.

Independent claim 1 has been amended to further define the invention. The claim now recites that the antenna element comprises the metallic cap, as shown in Fig. 1. Also, the subject matter of original dependent claims 7 and 18 has been elevated into independent claim 1.

It is submitted that claim 1 is in condition for allowance, as it is not disclosed or even suggested by the cited reference. Likewise, claims 2-6, 8, 10-13, 16, and 17 being dependent claims of an allowable base claim are themselves in condition for allowance.

14-17. Claims 14 and 15 are rejected under 35 USC 103 as being unpatentable over Ito.

It is submitted that claim 1 is in condition for allowance, as explained hereinbefore. Likewise, claims 14 and 15 being dependent claims of an allowable base claim are themselves in condition for allowance.

18. Claims 18 and 19 are rejected under 35 USC 103 as being unpatentable over Ito in view of Chin et al US Patent No. 6,802,840 (Chin).

Claims 18 and 19 are cancelled and hence the objection is rendered moot. It is submitted that claim 1 incorporating the subject matter of cancelled claim 18 is in condition for allowance, as explained hereinbefore.

19. Claim 20 is rejected under 35 USC 103 as being unpatentable over Ito in view of Edwards et al US Patent No. 6,033,401 (Edwards).

It is submitted that claim 1 is in condition for allowance, as explained hereinbefore. Likewise, claim 20 being dependent claims of an allowable base claim is itself in condition for allowance.

20. Claims 21 and 24 are rejected under 35 USC 103 as being unpatentable over Ito in view of Elliott (US Patent No. 4,800,899).

It is submitted that claim 1 is in condition for allowance, as explained hereinbefore. Likewise, claims 21 and 24 being dependent claims of an allowable base claim are themselves in condition for allowance.

21. Claims 22 and 24 are rejected under 35 103 as being unpatentable over Ito in view of Kasevich (US Patent No. 5,057,106).

It is submitted that claim 1 is in condition for allowance, as explained hereinbefore. Likewise, claims 22 and 24 being dependent claims of an allowable base claim are themselves in condition for allowance.

22. Claim 23 is rejected under 35 USC 103 as being unpatentable over Ito in view of Kasevich in view of Elliott.

It is submitted that claim 1 is in condition for allowance, as explained hereinbefore. Likewise, claim 23 being dependent claims of an allowable base claim is itself in condition for allowance.

23. None of the cited art discloses or even suggests the claimed invention.

Reconsideration of the application and allowance and passage to issue are requested.

Respectfully submitted,

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